UNIVERSITY OF GONDAR

COLLEGE OF MEDICINE AND HEALTH SCIENCES

DEPARTMENT OF MIDWIFERY

PROPORTION OF EPISIOTOMY AND FACTORS ASSOCIATED AMONG MOTHERS WHO GAVE BIRTH VAGINALLY AT PUBLIC HEALTH INSTITUTIONS OF SHIRE TOWN, NORTH ETHIOPIA.

BY: KIDANE NGUSE (BSc in Midwifery)

Name of Advisors:

1. **Mr. Temesgen Worku (Bsc, MSc)**
2. **S/r. Dariye Getaachew (BSc, MPH)**

A THESIS SUBMITTED TO DEPARTMENT OF MIDWIFERY, COLLEGE OF MEDICINE AND HEATLH SCIENCES, UNIVERSITY OF GONDAR IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTTER OF CLINICAL MIDWIFERY.

March, 2015

Gondar, Ethiopia

UNIVERSITY OF GONDAR
COLLEGE OF MEDICINE AND HEALTH SCIENCES
DEPARTMENT OF MIDWIFERY

PROPORTION OF EPISIOTOMY PRACTICE AND FACTORS ASSOCIATED AMONG MOTHERS WHO GAVE BIRTH VAGINALLY AT PUBLIC HEALTH INSTITUTIONS OF SHIRE TOWN, NORTH ETHIOPIA, 2015.

PRINCIPAL INVESTIGATOR: Kidane Nguse (BSc in Midwifery)

Tel: +251934537937

E-mail: kidane1224@gmail.com

Approved by the Examining Board

---------- ----------

Head, department of midwifery

ADVISORS

Mr. Temesgen Worku (Bsc, MSc) ----------
S/r. Dariye Getachew (BSc, MPH) ----------

---------- ----------

Examiner

ACKNOWLEDGEMENT

My deepest gratitude goes too primarily to my advisors Mr. Temesgen Worku (BSC, MSc) and S/r Dariye Getachew (BSc, MPH) for unlimited support throughout the whole process of my thesis made this paper come to into final.

I would like to forward my heartfelt thank to Mr. Measho G/slassie, Mr. Berihu Gidey, Mr. G/amlak Gidey, Mr Kahsay Zenebe and Mr. Haftom G/hiwot for their crucial comments and advice during this paper work.

I would also like to thank all my instructors for their devotion to equip me with all necessary knowledge and skill during my stay at University of Gondar and take part in my brighter future career.

I thank my entire data collector for their unreserved and dedicated cooperation to make this paper work come out true.

My thank also goes to the department of Midwifery, College of Medicine and Health Science for letting me have this opportunity to have practical experience in conducting research.

At last but not least I thank people who are working at Shire town health bureau, delivery ward of Suhul hospital, Tadelech Hailu health center and Oumor health centers for their indispensible information and cooperation

LIST OF ACRONYMS AND ABBREVIATIONS

APGAR - Appearance, Pulse, Grimase, Activity and Respiration

APH - Ante partum Hemorrhage

C/B - Cesarean Birth

HIs -Health Institutions

HIV - Human Immune Compromise Virus

NRFHR - Non Reassuring Fetal Heart Rate

NVD **-** Normal Vaginal Delivery

PPH - Post Partum Hemorrhage

UOG **-** University of Gondar

WHO - World Health Organization

Table of content

List of figure

List of table

ABSTRACT

Background: Episiotomy is the commonest obstetric surgical operation performed to increase the diameter of the vulvas outlet during the late period of the second stage of labour in order to facilitate vaginal delivery. The rate of episiotomy is on the decline in developed countries but still remains high in developing countries. Though practice of episiotomy has become common problem among mothers who delivered vaginally in Ethiopia, studies are limited to show the extent of the problem is unknown.

Objective: To assess proportion of Episiotomy practice and associated factors in Shire town health institutions

Methods: Facility based Cross- sectional study was conducted in three health institutions in Shire town, Tigray, Ethiopia. The study subjects were selected using systematic random sampling technique and data was collected using pre-tested and structured questionnaire and it was analyzed using SPSS version 20 software. Bivariate logistic regression analysis was done to determine the significant relation between each independent variable with outcome variable. Multivariable logistic regression analyses were done to determine relative prediction level of independent variables to the outcome variable. Variable having $p < 0.05$ was considered as significant and AOR with 95% CI was used to control possible confounders.

Results: Among the Study participants episiotomy was performed for 144(35.4%) mothers. age 15-20 [AOR=3.532(95%CI 1.059, 12.786)] and age of 21-34 [3.461(95%CI 1.243, 9.637)], primiparas [AOR= 2.124(95% CI 1.146, 3.935)], history of gestational hypertension [AOR=2.586(95%CI 1.0499, 6.377)], post term [AOR=2.350(95% CI 1.088, 5.076)] and use of oxytocin [AOR=2.189(95%CI 1.195, 4.010)] were significantly associated with episiotomy practice.

Conclusion and Recommendations:

Episiotomy practice at the study area is relatively high (35.4%) when we compare with the recommended practice by the World Health Organization (10%). More efforts should be made to reduce the rate of episiotomy in order to improve the well-being and quality of life of woman.

1. INTRODUCTION

1.1. Statement of the problem

Episiotomy is the commonest obstetric surgical operation performed to increase the diameter of the vulvas outlet during the late period of the second stage of labour in order to facilitate vaginal delivery and prevent complications of hard labor in both mother and her neonate experienced by women throughout the world [1, 2]. There are essentially two types thus: Midline, and mediolateral episiotomies; and each has its advantages and drawbacks[3]. Furthermore, it is recommended that the choice of episiotomy technique should be the one which the care giver is most familiar with[1]. The procedure is usually administered for several reasons including to prevent severe perineal laceration/tear in the parturient, especially in the primigravida[4], and was first reported in the 18th century[5]. Although episiotomy has become one of the most commonly performed surgical procedures in the world, it was introduced without strong scientific evidence of its effectiveness [1, 6, 7]. Therefore, despite many years of its practice, the operation has remained controversial.

Evidences from previous studies have indicated that the routine use of episiotomy may do more harm than benefit[1]. The restrictive versus routine use of episiotomy is associated with a lower risk of posterior perineal trauma, need for suturing perineal trauma, and healing complications at seven days [8]. It also has beneficial effects on reducing long-term complications [9]. They discovered in their study that episiotomy was associated with more pain, excessive bleeding, wound hematoma, infection and breakdown [10]. Therefore, indications for routine episiotomy are not well supported and they advocated restrictive use of episiotomy. As a result, the World Health Organization recommended that episiotomy should be performed only for a strictly limited number of indications [4].

According to widely accepted arguments, there are many benefits of episiotomy for the neonate; prevention of injuries, shoulder dystocia and mental retardation of the infant. Benefits for the mother are: reduction of severe lacerations, prevention of sexual

dysfunction, and prevention of urinary and fecal incontinence. But those things could also be complications of episiotomy, if it is being used nonrestrictive. Some other complications are also extensive bleeding, hematoma or infection[11].

Historically, episiotomy has been an element of vaginal delivery, with the rationale of preventing extensive perineal tearing extending to include the involvement of the anal sphincter and damage to the pelvic floor. It was thus thought to be protective of maternal morbidities such as perineal pain, sexual dysfunction, and urinary and fecal incontinence following a difficult vaginal delivery [9, 10, 12, 13].These morbidities may have a profound impact on a woman's recovery in the puerperium, and on subsequent health and psychological wellbeing.

This evidence has led to a decline in the incidence of episiotomy in many maternity centers around the world [13]. Nonetheless, episiotomy which is essentially a surgical procedure is generally associated with complications, some of which include pain, hemorrhage, and local anesthetic toxicity, wound infection and wound breakdown [8, 14]. The occurrence of these complications may be influenced by the skill and experience of the attending physician. Episiotomy also interferes with the mother's comfort during the postpartum period.

The fear of episiotomy by women in our environment has also been adduced as one of the reasons why some women receive antenatal care in hospitals but elect to deliver at homes where episiotomies are never performed and intrapartum care may be inadequate [15].Therefore this study is aimed to assess the magnitude of episiotomy and associated factors among mothers who delivered virginally in Shire public health institution, north Ethiopia.

1.2. LITERATURE REVIEW

1.2.1. Magnitude of episiotomy.

The rate of episiotomy has risen considerably and the reported rates of the procedure in around the world are different from country to country in different studies [7] .Based on many studies, routine use of episiotomy has gradually decreased in many developed countries [16] The incidence of episiotomy ranges from as low as 9.7% in Sweden to 100% in Taiwan[17]. In addition, the prevalence of episiotomy is recommended by the World Health Organization, as low as 10% [18]. A retrospective cross-sectional study conducted in Brazil in 2006 shows, the prevalence of performing episiotomy is 29.1% (CI95% 25.2% - 33.3%) [19]. In two different centers in Turkey study showed that episiotomy is performed in 64% and 74% of women who undergo vaginal birth and this rate increases to 95% in primiparas and they recommends, to reduce the rate of episiotomy and to develop the intrapartum care [19, 20]. In Nigeria, a report from Zaria[21] showed an episiotomy rate of 35.6% following all vaginal deliveries and 88.5% in primigravidae[21]; while in Enugu, the rate was 40.4% for women of all parities and 76.2% in primigravidae[7], from Ogbomoso showed an episiotomy rate of 34.3% [2]following all vaginal deliveries and from Lagos 54.9% all from Nigeria. Another recent report from Calabar, Nigeria showed a comparatively low episiotomy rate of 20.1% among all women that had a vaginal delivery; there was no stratification into parity groups[6].

The Argentine Episiotomy Trial Collaborative Group reported that episiotomy rates above 30% and 40% cannot be justified for multiparae and primigravidae, respectively[22].

In Ethiopia, a report from Tikur Anbesa Hospital , showed an episiotomy rate of 40.2 % following all vaginal deliveries[15] ; while in Jimma teaching Hospital, the rate was 25%for women of all deliveries[19].

1.2.2. Factors associated with episiotomy

In several studies, primiparous women showed significantly more vulnerability to perineal injuries following episiotomy[11]. In some studies, 3rd and 4th degree perineal lacerations increased following episiotomy in primiparous mothers[3]. While reports from USA commented that episiotomies will be necessary in almost all primigravidae[13], others reported that the procedure is not routinely recommended[11].

A retrospective cross-sectional study from January to December 2006 in Brazil found a significant association of episiotomy with adolescence (PR 1.74; CI 95% 1.33-2.28), age over 35 years (PR 0.35; CI95% 0.14-0.90), primi-parity (PR 4.73, CI95% 3.33-6.71), absence of previous vaginal delivery, in addition to those who had cesarean delivery in previous gestation (PR 5.44; CI95% 3.67-8.06) and related diseases at the time of delivery (RP 1.71, CI95% 1.30-2.25) were significantly associated with episiotomy [20].

A population-based, retrospective cohort study in Viet Nam result showed that these women having an episiotomy were associated with postpartum hemorrhage (adjusted odds ratio, AOR: 1.26; 95% confidence interval, CI: 1.08–1.46). Among multiparous women only, episiotomy was positively associated with a third- or fourth-degree perineal tear (AOR: 2.00; 95% CI: 1.31–3.06); in contrast, it was negatively associated with primiparous (AOR: 0.47; 95% CI: 0.37–0.60)[23].

As study results from south eastern Nigeria in 2008 showed that Women undergoing episiotomy were younger (mean age 24.7 years; range 16-37) than women without episiotomy (mean age 28.5 years, range 20-43). And also occipito-posterior position, vacuum extraction, forceps delivery, vaginal breech delivery, and history of Caesarean section were highly associated with episiotomy .It is also associated with major perineal lacerations and increased length of hospital stay [24].

A study conducted in Nigeria Anecdotal evidence holds that midwives were then indoctrinated to cut at the peak of uterine contractions when pain is maximal with the hope that the ischemic pain of uterine contractions would mask the pain of the

episiotomy. This practice of performing episiotomy without anesthesia is cruel and should be abandoned in all maternity units[4].

Another study from Nigeria showed that the rate of episiotomy was higher among those who had assisted vaginal delivery (80.0%) than spontaneous vertex delivery. The episiotomy rate at this centre was high (34.3%) in comparison to the recommended 10% by the World Health Organization. Null parity and assisted vaginal delivery appear to be the risk factors for episiotomy in this centre[21].

A cross-sectional study which was conducted in Tikur Anbessa Hospital, Ethiopia result showed that null parity (77.7% vs. 21.3%), the duration of the second stage of labor more than 90 minutes (76% vs. 13.8%) and instrumental delivery (86.2% vs. 13.8%) has been shown to be significantly associated to having episiotomy, while the birth weight and Apgar scores didn't show significant differences. Local anesthesia was used only in 71 (28.1%) cases among the 253 on whom information regarding the use of local anesthesia was retrieved [25].

A retrospective cross-sectional study in Jimma teaching hospital, Ethiopia result showed that the presence of perineal lacerations was higher in the group not subject to episiotomy, however only 1st and 2nd degree lacerations were described and variables, maternal diseases (RA 1.99, CI95% 1.20-3.28) and absence of previous vaginal delivery (9.85 RA, CI95% 6.04-16.06) were associated with episiotomies[19].

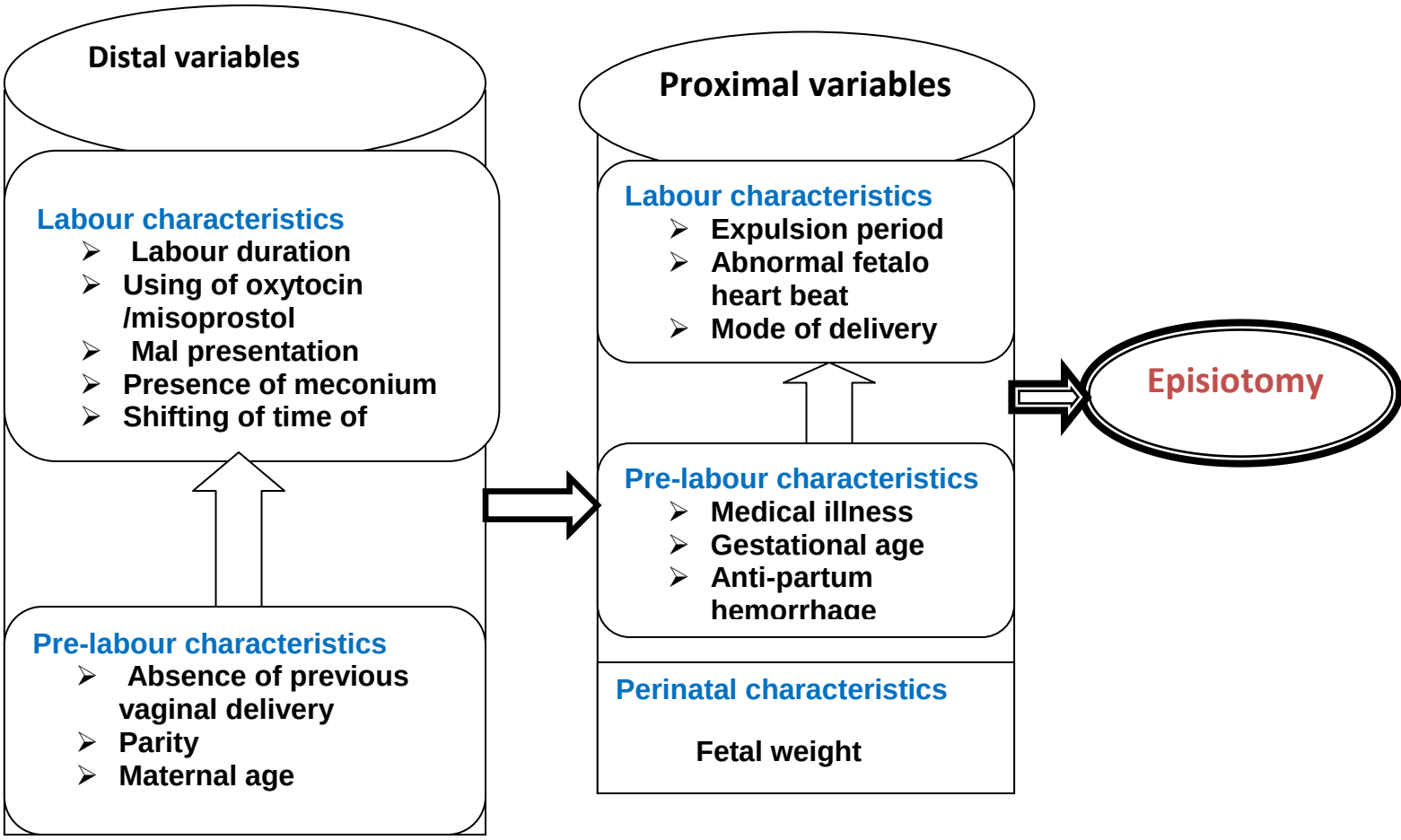

Figure 1 Conception frame work for factors influencing the practice of episiotomy in Shire governmental health institution, 2014

1.3. JUSTIFICATION

Episiotomy is indicated in the second stage of labor when the perineum threatens to tear, and it may be assumed that the threat to tear has a direct relationship to the stretch ability of the perineum. Many countries have recognized that high episiotomy rates are an indicator of high rates of unnecessary obstetric interventions. We do not question the rationale for episiotomy, when there is a good indication for its performance. Nowadays, with many more HIV-positive pregnant women, any unnecessary blood flow during childbirth is harmful.

Obstetric perineal trauma is assumed to be a serious health problem for women as well as for their child during their childbirth. Hence, most of the time routine use of episiotomy can be associated with morbidity either immediately or postnatal period including Pain, Narrowing of the vagina, disfigurement, asymmetry, sexual dysfunction (dyspareunia), excessive bleeding, wound hematoma, local anesthetic toxicity and wound infection

Though practice of episiotomy has become common problem among mothers who delivered vaginally in the world, but studies are limited in Ethiopia and as far as I searched no similar study has been done in the study area, so the extent of the problem is unknown.

Therefore, It is important to review the rate and obstetric predictors of episiotomy because such a review will guide towards more informed discussions about the level of unnecessary interventions and episiotomies and Can be used by policy makers, governmental and nongovernmental organizations and health workers as reference for policy making, planning and the implication for the midwifery profession, since this type of morbidity is the main concern of Maternal health.

2. OBJECTIVES

2.1. General objective:

- To assess proportion and factors associated with Practice of episiotomy among mothers who gave birth vaginally in Shire town health institutions, north Ethiopia, 2014.

2.2. Specific objectives

- To determine the proportion of episiotomy among mothers who gives birth vaginally in Shire town health institution.
- To identify factors associated with practice of episiotomy among mothers who gives birth vaginally in Shire town health institution.

3. METHODLOGY

3.1. Study design

Institution based cross-sectional study was conducted**.**

3.2. Study area and period

The study was conducted from May to August, 2014 in public health institutions in Shire town which is the capital town of the North West administrative zone, located at a distance of 1087 kilometers from Addis Ababa in north direction and at 304 kilometers from Mekelle in western direction, the capital city of the Tigray region. In the town there is 1 hospital and 2 health centers which provides a maternal and neonatal health services.

3.3. Source population

The target population was all women who gave birth vaginally in shire town governmental health institution.

3.4. Study population

The study population was all women that have delivered vaginally in Shire town governmental health institution during data collection period.

3.5. Inclusion and Exclusion Criteria

Inclusion Criteria

Inclusion criterion for this study was all women who gave birth vaginally in shire town governmental health institution during data collection.

Exclusion Criteria

- Pregnant women, who come with fetal death preceding labor was excluded.

3.6. Sample size and Sampling technique

3.5.1. Sample size

The required sample size of the study participants was determined by using basic assumption of 95% confidence level, 5% margin of error and 40.2%[15] estimated

proportion of vaginal delivery with episiotomy. After calculating the sample size, 10% of sample was added for non-response.

Therefore, using this formula $$n = \frac{(Z\alpha/2)^2 P(1-P)}{d^2}$$

$$n = \frac{(1.96)^2 \ 0.402(1- \ 0.402)}{(0.05)^2} = 370$$

Assumptions;

- n = the number of pregnant mothers to be interviewed;
- Z = 95% confidence interval, which is 1.96
- P = proportion of episiotomy practice 40.2% which was obtained from research conducted among labouring mothers in Tikur Anbesa hospital, Ethiopia [15]
- d = the margin of error is taken as 5%
- Finally, by adding 10% of non response rate the calculated sample size was =**407**

3.5.2. Sampling technique

First the skip interval was calculated by dividing the total four month vaginal deliveries to the sample size (1,200/407~3). Hence, from the total of 1,295 mothers delivered in shire public health institutions during the study period. By using systematic random sampling technique, 407 laboring mothers' were selected and charts were reviewed. Then, I proportionally allocated the total sample to each health institution based on the mean number of clients. Hence; 265**,** 118 and 24 participants were selected from Suhul hospital, Tadelech Hailu health center and Oumer health center respectively from May 1 to August 30, 2014. Every third women who gave birth were selected by systematic sampling technique; then the first study participant was selected by simple random sampling and charts were reviewed until the targeted sample was completed at Shire town health institutions. The total sample was proportionally allocated according to the average number of study subjects came to health institutions.

Schematic presentation of sampling technique

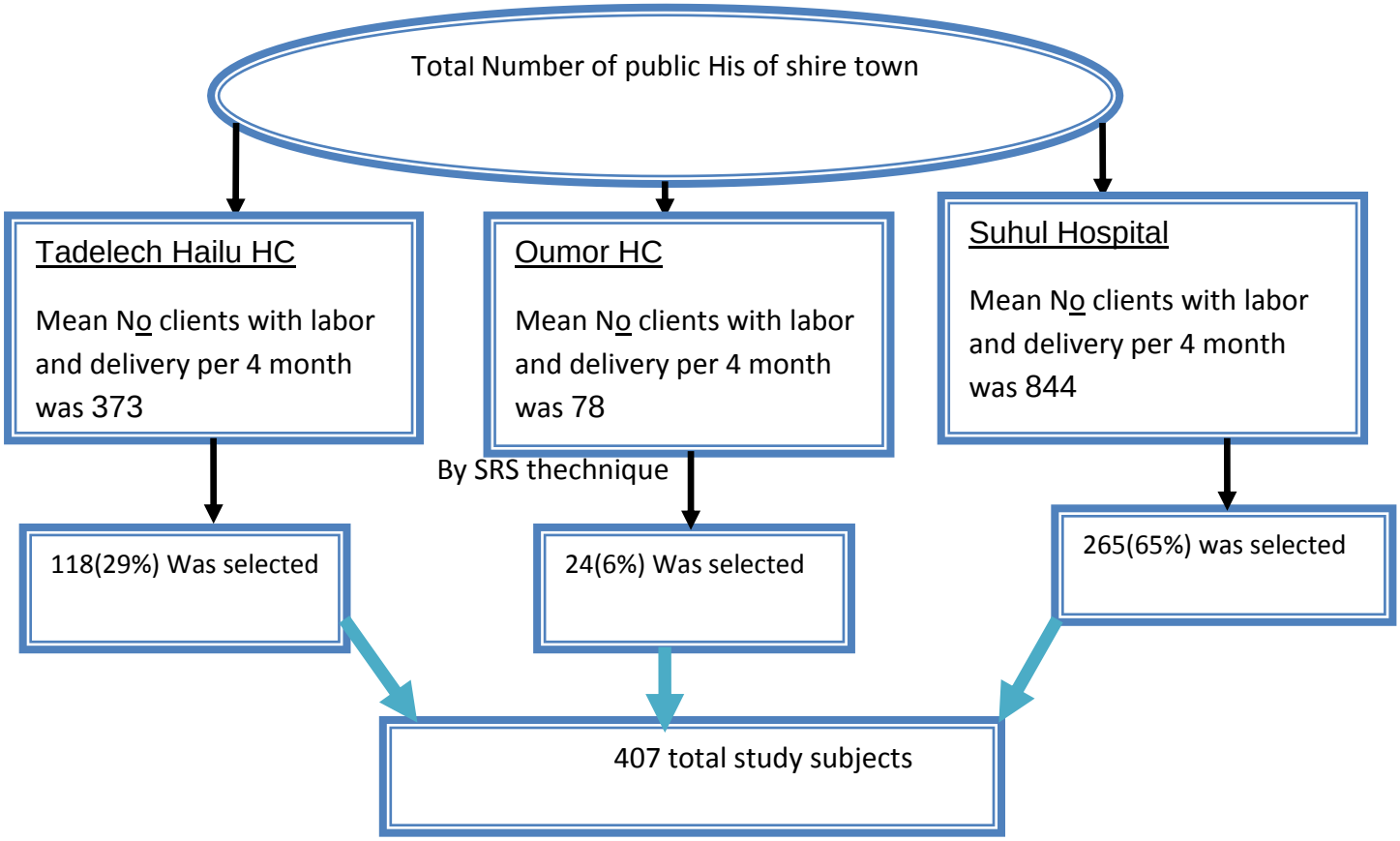

Figure 2. Schematic presentation of the sampling procedure, Shire Town, North Ethiopia, March 2014

3.7. Variables of the study

Dependent variables

Practice of episiotomy

Independent variables

1. **Pre-labour characteristics**; maternal age, parity, previous normal birth, presence of hypertensive syndromes, clinical or gestational diabetes.
2. **Labor characteristics:** gestational age at birth,
    - Labor duration
    - Expulsion period
    - Use of misoprostol or oxytocin at labor
    - Alterations in fetal heart frequency
    - Presence of me conium
    - Fetal presentation
    - Mode of delivery
    - Shifting of time of delivery
    - Attendant
3. **Perinatal results**: Apgar score rate in the first and fifth minutes, newborn's weight, and presence of perineal lacerations

3.8. Operational definitions

Episiotomy is a surgical procedure for widening the outlet of the birth canal to facilitate delivery of the baby between the area of the anus and the vulva (perineum).

Perineal laceration or tear is a rent of varying degrees (first to fourth) involving the perineum of a women during vaginal birth

Prematurity is a term for the broad category of neonates born at less than 37 weeks' gestation

Primigravida is a medical term used to refer to a woman who is pregnant for the first time.

Primiparous is a woman who had her first childbirth, irrespective of the neonatal outcome, after carrying a pregnancy for at least 28 weeks (≥28 weeks).

3.9. Data collection procedure

The data was collected by using observational checklist addressing the maternal obstetric care related variables, immediate neonatal outcomes and pre-labor related variables for every 3rd laboring mother after delivery including maternal chart review. The questionnaire was first prepared in English then translated to local language (Tigrigna) and then back translated to English by language expert**.** Overall supervision was made by the principal investigator. The data collection tool was pre-tested on 20 similar cases in the Axum hospital.

Findings and experiences from the pre-test were utilized in modifying the interview method and data collection tool. Two diplomas midwife for each HIs, from the institution were our data collectors, had one BSC supervisors for each.

Half day training was given for data collectors on general principles of the questionnaire and how to use it during data collection. Data were collected for four month and data collection was started on (May first to august 31). The collected data was checked for completeness and consistency of the questionnaire

3.10. Data quality Control

The quality of data was assured by using properly designed and pretested on 20 similar cases of the questionnaire and supervision of data collectors. Both the data collectors and supervisors were given the data collecting tool guide which was developed before the training. Each data collector checked the questionnaires for completeness before leaving each study participant. Each questionnaire was reviewed daily by supervisors and the principal investigator to check for completeness and clarity.

3.11. Data processing and analysis

All the returned questionnaires were checked for completeness, cleaned manually, coded and entered in to EPI INFO version 7 and then transported to SPSS windows

version 20 for further analysis. Frequencies and cross tabulations were used to summarize descriptive statistics and tables were used for data presentation.

Bivariate logistic regression was used to determine association between independent and dependant variables. Pvalue ≤ 0.2 in bivariate analysis was entered in to next multivariate analysis and multiple logistic regression analysis was done to determine relative prediction level of independent variables to the outcome variable. Variable having $p < 0.05$ was considered as significant and AOR with 95% CI was used to interpret the result.

4. ETHICAL CONSIDERATION

The ethical approval and clearance was obtained from Department of Midwifery, University of Gondar ethical committee. Permissions were obtained from the concerned bodies of the Tigray Regional Health bureau and District Health Offices of North West Zone and each health institutions. After securing official letter from Department of Midwifery, the study health institutions were communicated and permission was obtained to proceed on the study. Verbal consent was obtained from the participants after informing them all the purpose, and the confidentiality of the information and the voluntary nature of the participation in the study as it were stated in the information sheet annexed. Women found to be vaginal delivered with episiotomy were given counseling on the possible perineal care after data collection.

5. DISSEMINATION OF THE RESULTS

The findings of this study will be submitted to University of Gondar, department of midwifery, Tigray North west zone health office, Tigray regional health bureau and to the health centers. This paper will be sent for publication to journals and also will be present at annual academic conference, on scientific conference, workshops and other scientific presentations.

6. Results

A total of 407 pregnant women who gave birth vaginally were enrolled in this study with 100% response rate.

The proportion of episiotomy practice was 35.4% (CI 95% 30.5%, 39.8%) and mediolateral technique was commonly done when indicated in Shire governmental health institution.

6.1. Pre-labor characteristics

From the selected samples, 213(52.2%) lives in the rural area. The majority of the subjects were in the age group 21-34years 66.8%. The mean age of respondents was 26.28 years with 6.18 years of standard deviation. More than one-half of the subjects 267(65.6%) had 1 and more babies previously. Out of the study subjects; 42(22.3%), and 43(22.0%) have gestational hypertension and other disease such as HIV AIDS, APH, PROM, UTI, asthma respectively (table 1).

Table1. Distribution of laboring mothers by their pre-labor characteristics (N=407) Shire town, North Ethiopia, February 2015.

variable		frequency	%
Age	15-20	95	23.3
	21-34	272	66.8
	35& above	40	9.8
Residence	Rural	213	52.2
	urban	194	47.5
Gravidity	Primi	140	34.4
	Multi	267	65.6
Presence of previous vaginal delivery			
	Yes	218	53.6
	no	189	46.4
Presence of medical disease during pregnancy			
Gestational Hypertension		42	10.3
Others		43	10.6
Normal gestation		322	79.1

N.B. others= HIV AIDS, APH, PROM, UTI, asthma

6.2. Labor characteristics

Majority of the mother's gestational age at the time of delivery were term 324(79.6%). The mean duration of labour in hours was 9.86 with standard deviation of 4.84 in the range of maximum of 48hr and minimum of 1hr. sixty four (15.7%) mothers who came to the public institution to give birth took oxytocin and 36(8.8%) took misoprostol. From all mothers who come to give birth, 264(64.9%) stays for 0.2-1hr, 134(32.9%) stays for 1.1-2hr and 9(2.2%) for 2hr during 2nd stage of labour at the delivery coach.

During the study time, 322(79.1%) laboring mothers were with normal condition of FHB, 60(14.7%) with bradycardia while 25(6.1%) were with tachycardia of fetal condition. From the study subjects, 82(20.1%) had miconium stained amniotic fluid during labor and delivery during vaginal assessment.

Two hundred fifty three (37.8%) laboring mothers gave birth during the night time. Three hundred sixty (88.5%) fetus were cephalic and forty seven (11.5%) were breech presentation. Three hundred sixty four (89.7%) were delivered vaginally, while 43 (10.3%) delivered by instrumental assisted delivery.

Table2. Distribution of laboring mothers by their labor characteristics (N=407) Shire town, North Ethiopia, February 2015.

variable		number	%
Gestational age	**Preterm**	49	12
	Term	324	79.6
	Post-term	34	8.4
Duration of labour in 2nd stage	**0.2-1**	264	64.9
	1.1-2	134	32.9
	>2.1	9	2.2
Oxytocin use	**Yes**	64	15.7
	no	343	84.3
Misoprostol	**Yes**	36	8.8
	no	371	91.7
Condition of FHB	**Normal**	322	79.1
	Bradycardia	60	14.7
	tachycardia	25	6.1
Presence of miconium	**Yes**	82	20.1
	No	325	79.9
Time of delivery	**Night**	253	37.8
	Day	154	62.2
Mode of delivery			
	Instrumental delivery	43	10.3
	NVD	364	89.7
Fetal presentation during delivery	**Breech**	47	11.5
	Cephalic	360	88.5
Attendant	**Ho**	71	17.4
	Midwifery	306	75.2
	Nurse	10	2.5
	Obstetrician	20	4.9
Reason for episiotomy practice	**prolonged labor**	41	29.7
	NRFHR	45	32.6
	Breech presentation	18	13.0
	fetal prematurity	8	5.8
	prolonged + NRFHR	12	8.7

Note; NVD= normal vaginal delivery

6.3. Perinatal results

Majority of the Apgar score of the neonate were normal, 306(75.2%). The birth weight of most of the babies delivered 343(84.3%) ranged from 2.50kg to 3.99kg. Thirty-four babies (8.3%) had birth weight of 2.49kg or less, while 7.4% had birth weight of 4kg and above. Out of the 407 laboring mother 109(26.8%) were faced perineal laceration ranging from grade I to II. (Table 3)

Table3. Distribution of laboring mothers by their perinatal outcome characteristics (N=407) Shire town, North Ethiopia, February 2015.

variable	Number	%
APGAR score		
Low	90	22.1
Normal	306	75.2
Very low	11	2.7
Birth weight		
Macrosomia	30	7.4
Low bith weight	34	8.3
normal	343	84.3
Perineal laceration		
Yes	68	13.2
No	339	86.8
Extent of perineal laceration		
Grade-I	71	17.4
Grade-II	30	7.4
Grade-III	3	0.7

6.4. Factors associated with episiotomy

All independent variables were entered into binary logistic regression and those variables which were at p-value <0.2 were included in the multivariate analysis. Age, gestational age, parity, presence of medical disease and use of oxytocin were significantly associated with episiotomy practice during multivariate analysis.

Episiotomy was significantly associated with age 15-20 [AOR=3.532(95%CI 1.059, 12.786)] and age of 21-34 [AOR=3.461(95%CI 1.243, 9.637)]. The odds of episiotomy were 3.532 times greater among laboring mother age of 15-21 years as compared laboring mother of 35 and above. Similarly, the odds of episiotomy were 3.461 times greater among laboring mothers of age 21-34 as compared to those laboring mothers of 35 and above.

It was also observed that the absence of episiotomy was not associated with adverse Perinatal results, such as Apgar score below 7 in first and fifth minutes, low birth weight (below 2,500 grams) , Macrosomia (over 3,999 grams) newborn and adverse perineal tear. In relation to perineal laceration frequency, in patients who had no episiotomy it was significantly higher (86.8%) if compared to those who had the procedure (13.2%); in other words, the risk of lace-ration is 6 times higher for patients who had no episiotomy. However, no 3rd or 4th degree laceration cases, considered more severe, were identified (Table 1).

Primiparous was significantly associated with episiotomy [AOR= 2.124(95% CI 1.146, 3.935)], history of gestational hypertension [AOR=2.586(95%CI 1.0499, 6.377)].The odds of episiotomy were 2.124 times higher among Primiparous as compared Multiparous. Similarly, the odds of episiotomy 2.586 times higher among those who had history of gestational hypertension as compared those normal gestation.

Episiotomy was significantly associated with post term [AOR=2.350(95% CI 1.088, 5.076)] and use of oxytocin [AOR=2.189(95%CI 1.195, 4.010)]. The odds of episiotomy were 2.350 times higher among post term as compared term gestational age of laboring mother. Similarly, the odds of episiotomy 2.189 times higher among laboring mothers

who had use oxytocin (augmentation/induction) as compared laboring mothers who didn’t use oxytocin. Table (4)

Table 4. Logistic regression analysis of factors associated with episiotomy, Shire town, North Ethiopia, February, 2015.

variable		Episiotomy		Crude OR(95% CI)	Adjusted OR (95 % CI)
		Yes	No		
Age					
15-20		47	48	**6.854 (2.472, 19.002)**	3.532(1.059,11.786)
21-34		92	180	3.6(1.356, 9.439)	3.461(1.243,9.637)
35 and above		5	35		
parity	Primi	70	70	**2.608(1.703, 3.994**)	**2.124(1.146,3.935)**
	Multi	74	193		
Presence of medical disease					
Hypertension disorder		22	20	**2.306(1.205,4.413)**	2.586(1.049, 6.377)
Othes		18	25	1.509(0.788, 2.889)	2.304(1.111, 4.781)
Normal gestation		104	218		
Presence of previous vaginal delivery	yes	62	82		
	no	156	107	1.928(1.278, 2.910)	**
Gestational age					
preterm		20	29	1.459(.788, 2.700)	0.588(0.252,1.372)
post-term		20	14	**3.022(1.468, 6.219)**	**2.345(1.087,5.060)**
term		104	220		
Oxytocin use					
	Yes	38	106	**3.268(1.887, 5.658)**	**2.189(1.195, 4.010)**
	No	26	237		
Use of misoprostol					
	Yes	23	121	**3.381(1.681, 6.801)**	**
	No	13	250		
Mode of delivery					
Instrumental delivery		24	19	2.568(1.354, 4.872)	**
Normal vaginal delivery		120	244		
Duration of labour in 2nd stage					
	0.2-1	82	182		
	1.1-2	57	77	1.643(1.068, 2.527)	**
	>2.1	5	4	2.774(.726, 10.600)	

Note: - ** not significant during multivariate analysis, P.value < 0.05, CI=Confidence interval OR= Odds Ratio

7. Discussion

The study indicated that proportion of episiotomy practice among laboring mothers found to be 35.4% at health institutions of Shire town which was over three times the recommended value by the World Health Organization [16, 26]. But it is very close to the finding in Zaria[21] Nigeria, in 34.3% Ogbomoso[2] and slightly lower than the values found in Abia (45%)[4], and Lagos[14] all in Nigeria. The similarity may be due to the some service providing and the setup.

The rate of episiotomy varies from one region to another. The rate of episiotomy is on the decline in developed countries but still remains high in developing countries. In this context the present study attempted to asses proportion of episiotomy practice and factors associated at governmental health institutions of Shire town.

The result of this study was lower than the previous studies done on laboring mothers at delivery unit in Tikur Anbesa hospital, found the prevalence of episiotomy was 40.2%.[15] This difference can be explained by the time difference, which may suggest a moderate reduction probably due to the increased emphasis on the restrictive use of episiotomy at the institution in line with evidence based recommendations and an increasement of quality of service and upgrading the service providers through pre-service and in-service training. Though the episiotomy rate in my study was moderate reduction observed among laboring mothers in a related study from Tikur Anbesa Hospital,[15] it is still far higher than 10% recommended by the World Health Organization[27] , which calls for continuous retraining of labor ward staff especially the midwives who usually conduct most of the deliveries[6] .

However, this study found a higher prevalence of episiotomy compared to a study done at Jimma teaching Hospital which reported a 25% prevalence of episiotomy among laboring mothers[28]. This higher result may be due to the study was assess the prevalence of episiotomy among mothers who gave birth a two year retrospective study from registration book in the teaching hospital only. Also, the finding of this study is higher when compared with a study done at Brazil, and study done in Nigeria , where the prevalence of episiotomy was 29.1% [19] and 21.0%[8],respectively. This difference may be due to difference in study area and study participants.

Factors associated with episiotomy among laboring mothers are similar to other studies done so far [2, 8, 19, 25, 28, 29]. In this study, the most significant factors associated with episiotomy during labor and delivery were age (adolescent) 15-20 and age of 21-34 , primi-parity, history of medical disease, gestational age and use of oxytocin. While preterm labors were inversely associated with episiotomy during labor and delivery.

The rate of episiotomy decreased with increase in the age of the subjects from 19 years upwards. This may be as a result of a more selective use of episiotomy in Multigravida and older women at those centers. This study showed that there was a statistically significant association between episiotomy and adolescent age. The odds of episiotomy were 3 times higher among laboring mothers with adolescent as compared to mothers 35 years and above. This finding is consistent with study done at Brazil which found that adolescents' group had a 74% higher risk of having episiotomy in pregnant patients who gave birth vaginaly [20].

A similar justification might be suggested to Primiparous parturient, out of which around 50% were submitted to episiotomy, with a 2 times higher risk. Isolatedly, it can be suggested that primiparity was the factor which presented a higher association for episiotomy performance, but it did not remain significant after multivariate analysis. Episiotomy rates were particularly high in primigravida and younger parturient. Higher rates have even been reported in other parts of Ethiopia [19] . In some studies, t he high rate of episiotomy in primigravid women and younger women suggests that physicians and mid-wives in Nigeria still sub-consciously apply a policy of routine episiotomy to these categories of women.

By contrast, the declining incidence of episiotomy with increasing age and parity suggest a selective use of episiotomy in multigravid women and older women. T he association of younger age with episiotomy may also reflect an interaction between younger age at first birth and a high rate of episiotomy at first birth, as other studies have reported[15, 20]. Other reasons frequently presented to explain these disparities are biological immaturity and the expectations of midwife and physicians about perineal protection attempt in particularly young pregnant women. No studies directed to

assessing this psychological concept in health professionals or its consequences were found[30].

The majority (42.2%) of the episiotomies were performed by midwives. This was not surprising because most vaginal deliveries in the center are conducted by midwives except when there is an identified risk factor warranting the attention of the doctor. Only 11.1% of the parturient had their episiotomy performed by a consultant or senior. This finding is a reflection of the practice in our centre where senior members of the obstetric team are only sparingly invited to conduct high risk deliveries. The finding of this study is consistent with study done in Nigeria to assess who performed the procedure, where 75.6% episiotomies were performed by midwifes.[14] The similarity between this study's findings may be reasoned in two ways. First, the settings of the studies are similar (Institutional based cross sectional studies was conducted), secondly the some study participant were enrolled for the studies.

Another significant factor associated with episiotomy during pregnancy identified in the present study was presence of associated disease at birth. The odds of episiotomy 2.586 times higher among those who had history of gestational hypertension as compared who normal gestational. This finding is consistent with study done at Brazil which found that two times higher among hypertensive disorder when they compared with normal gestation.[20]

Furthermore, this study identified higher gestational age at delivery were significant factors that increased the risk of episiotomy in laboring mothers and the reasons may not be unbelievable since fetal weight increased with gestational age, and larger weight of the newborn may increase the perceived threat of perineal tear. This finding was supported by study done in south-east, Nigeria.

In relation to perineal laceration frequency, in patients who had no episiotomy it was significantly higher (86.8%) if compared to those who had the procedure (13.2%); in other words, the risk of lace-ration is times higher for patients who had no episiotomy. However, no 3rd or 4th degree laceration cases, considered more severe, were identified. In this study perineal laceration was significantly associated with birth weight, the odds of perineal laceration was five times higher among mother who gave birth 4kg and above as compared 2.5kg or less. But, not significantly association birth weight with

episiotomy. Similarly, a study done in Enugu, South-East Nigeria, With respect to maternal and neonatal outcomes, the birth weights of babies delivered in the episiotomy group was statistically higher than those of women who did not receive episiotomy. No woman in the episiotomy group sustained additional perineal lacerations unlike in the no-episiotomy group where 35.5% (89/251) of women sustained perineal lacerations[7]. In some researchers justifies protection of pelvic floor integrity is without doubts the most common indication for episiotomy. First and second degree lesions are considered mild, easily corrected and healed and they do not cause a great damage to the puerperal patient, while those of third and fourth degree are classified as severe and may lead to urinary and fecal incontinence.[31]

8. LIMITATIONS OF THE STUDY

Limitations of the study

- ✓ Cross sectional nature of the study, which cannot able to infer the consequence of episiotomy.

9. CONCLUSIONS

Episiotomy among laboring mothers found to have association with: age, null-parity, post-term gestational age, presence of medical disease.

The proportion of episiotomy practice among mothers who gave birth vaginally in Shire town health institutions was high in reference to WHO recommendation.

10. RECOMMENDATIONS

Based on finding of the study the following recommendations can be forwarded;

To regional health bureau:

- Measures should be taken to lower the rate of episiotomy rate.

For maternity service providers:

It is important to reduce the rate of episiotomy in order to improve the well-being and quality of life of woman.

Design programs which improve ANC utilization, in order to improve the well-being and quality of life of woman by preventing medical disease.

For researchers:

- Further study, wider and different geographical sites is recommended which includes a well designed prospective study will further elucidate the need for episiotomy in the patient population in the area.

11. Reference

1. Carroli G, Mignini L. Episiotomy for vaginal birth. Cochrane Database Syst Rev2009.CD000081.doi: http://dx.doi.org/10.1002/14651858.CD000081.pub2 PMID:19160176.
2. Alayande, B.T., I.O. Amole, and D. Akin, Relative frequency and predictors of episiotomy in Ogbomoso, Nigeria. Internet Journal of Medical Update-EJOURNAL, 2012. **7**(2).
3. Baskett, T.F., A.A. Calder, and S. Arulkumaran, Munro Kerr's operative obstetrics. 2014: Elsevier Health Sciences.
4. Räisänen S, Vehviläinen-Julkunen K, Heinonen S. Need for and consequences of episiotomy in vaginal birth: a critical approach. Midwifery. 2010Jun;26(3):348-56.
5. Thacker, S.B. and H.D. Banta, Benefits and risks of episiotomy. Women & health, 1983. **7**(3-4): p. 161-178.
6. Inyang-Etoh, E. and A. Umoiyoho, The practice of episiotomy in a university teaching hospital in Nigeria: How satisfactory? International Journal of Medicine and Biomedical Research, 2013. **1**(1): p. 68-72.
7. Izuka, E., et al., Prevalence and predictors of episiotomy among women at first birth in Enugu, south-east Nigeria. Annals of medical and health sciences research, 2014. **4**(6): p. 928.
8. Mutihir JT, Ujah IOA. Episiotomies in the Jos University Teaching Hospital. Highland Med Research J 2005;3:31-35.
9. Signorello L, Harlow B, Chekos A, Repke J. Postpartum sexual functioning and its relationship to perineal trauma: a retrospective cohort study of primiparous women. Am J Obstet Gynecol 2001;184:881–8.
10. MacArthur A, MacArthur C. Incidence, severity, and determinants of perineal pain after vaginal delivery: aprospective cohort study. AmJ Obstet Gynecol 2004;191:1199–204.
11. Jovanovic, N.S., D.M. Kocijancic, and M.M. Terzic, Current approach to episiotomy: Inevitable or unnecessary? Central European Journal of Medicine, 2011. **6**(6): p. 685-690.
12. Eason E, Labrecque M, Marcoux S, Mondor M. Anal incontinence after childbirth. CMAJ 2002;166:326–30.
13. Meyn L, Weber AM. Episiotomy use in the United States 1979-1997. Obstet Gynaecol 2002;4:49.53.
14. Ola ER, Bello O, Abudu OO, Anorlu RI.Episiotomies in Nigeria: Should their use be restricted? Niger Postgrad Med J 2002;99:13-16.S.
15. Kiros K and Lakew Z. Magnitude of episiotomy in a Teaching Hospital in Addis Ababa, Ethiopia. Ethiop Med J 2006;44:205-209.
16. Çalýþkan E, Öztürk N, Akyan B, Yalvaç S, Dilbaz B, Haberal A. Analysis of 47145 births in the health care centres third step: An epidemiologic study. MN-GORM. 2003;9:88–91.
17. Graham, I.D. and D.F. Graham, Episiotomy counts: Trends and prevalence in Canada, 1981/1982 to 1993/1994. Birth, 1997. **24**(3): p. 141-147.

18. Karaçam Z, Eroğlu K. Effects of episiotomy on bonding and mother's health. J AdvNurs. 2003;43:384–94. .
19. Marai W. A two years retrospective review of episiotomy at Jimma Teaching Hospital, southwestern Ethiopia. Ethiop Med J. 2002 Apr;40(2):141-8.
20. Carvalho CC, Souza AS, Moraes Filho OB. [Prevalence and factors associated with practice of episiotomy at a maternity school in Recife, Pernambuco, Brazil]. Rev Assoc Med Bras. 2010 May-Jun;56(3):333-9. .
21. Sule ST, Shittu SO. Puerperial complication of episiotomy at Ahmadu Bello University Teaching Hospital, Zaria, Nigeria. East African J Med 2003;80:351-356.
22. Friese, K., et al., Routine vs selective episiotomy. The Lancet, 1994. **343**(8895): p. 486-487.
23. . Myerscough PR. Episiotomy: maternal injuries. In: Myerscough PR. (Ed) Munro kerr's operative obstetrics. 5th Edition. Bailliere Tindall, U.K. 1995. Pp 453-456.
24. Ogunyemi D, Manigat B, Marquis J, Bazargan M. Demographic variations and clinical associations of episiotomy and severe perineal lacerations in vaginal delivery. J Natl Med Assoc. 2006; 98:1874-81. .
25. Lothian JA, Amis D, Crenshaw J. Care practice #4: No routine interventions. J Perinat Educ. 2007;16:29–34. [PMC free article] [PubMed.
26. Scott JR. Episotomy and vaginal trauma. ObstetGynecolClin North Am. 2005;32:307–21. .
27. . Liljestrand J. Episiotomy for vaginal birth: RHL commentary (last revised: 20 October 2003). Geneva: World Health Organization Reproductive Health Library; 2003.Availablfrom:http://apps.who.int/rhl/pregnancy_childbirth/childbirth/2nd_stage/jlcom/en/index.html [accessed 20 February 2014].
28. Trinh AT, Khambalia A, Ampt A, Morris JM, Roberts CL. Episiotomy rate in Vietnamese-born women in Australia: support for a change in obstetric practice in Viet Nam. Bull World Health Organ. 2013 May 1;91(5):350-6. .
29. Hartmann K, Viswanathan M, Palmieri R. Outcomes of routine episiotomy: A systemic review. JAMA 2005;293:2141-2148.
30. Van Eyk, N., et al., Obstetric outcome of adolescent pregnancies. Journal of pediatric and adolescent gynecology, 2000. 13(2): p. 96.
31. Robinson, J.N., et al., Predictors of episiotomy use at first spontaneous vaginal delivery. Obstetrics & Gynecology, 2000. 96(2): p. 214-218.

12. Annexes

Information Sheet

Title of the research Project: Prevalence and factors associated with Practice of episiotomy among mothers who gives birth vaginally in Shire town health institution, Shire.

Principal Investigator: Kidane Nguse (Bsc.)

Advisor: 1. S/r. Dariye Getachew (BSc, MPH)

2. Mr. Temesgen Werku (Bsc, MSc)

Name of the organization: University of Gondar; *College of Medicine and Health Sciences*

Sponsor: University of Gondar

Introduction

My name is Kidane Nguse and student at University of Gondar for masters' degree. I am doing a research on mothers delivered with episiotomy as a part of my study course. I am going to give you information and invite you to be part of this research. Before you decide to be part of the research you can talk to anyone you feel comfortable with about the research.

If there is any word that you don't understand while I am giving the information, please stop me and ask me and I will explain to you.

Purpose of the Research

The aim of the study is to assess the prevalence and determinants of episiotomy. Many literatures in various parts of the world including Ethiopia state that episiotomy can be associated with morbidity either immediately or postnatal period. This study seeks to appraise why and how much episiotomy was practiced in Suhul Hospital. It is envisaged that the findings of this study would help us bring to the fore the need for review of our practice and/or reinforce our current practice as regards of episiotomy.

Voluntary participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. Whether you choose to participate or not, all the services you receive as any member of this community will continue and nothing will change. If you choose not to participate in this research, you will be offered all the services that are routinely offered. You may change your mind later and stop participating even if you agreed earlier.

Confidentiality

The information that collected for this research will be kept confidential. It will be stored in a file using codes, without your name. And it will be exposed to anyone except the principal investigator. In addition it will be used only for this particular research but not other purposes.

Benefits

Your participation in this research may not directly provide you a certain benefit as an individual. But it helps us in assessing the prevalence and determinant of episiotomy and to design better intervention to reduce unnecessary episiotomy.

Risks and Side effects

There are no side effects and known risks related with this kind of research so far. The only discomfort could be from sharing us few minutes (about 20 minutes) for interview.

Who to contact

This research will be reviewed and approved by the Ethical Review Committee of the University of Gondar. If you wish to find about more or if you wish to ask questions now or later you can use the contact addresses below

1. *Kidane Nguse* (Bsc.) Tel: +251-934537937

   E-mail: kidane1224@gmail.com

2. *Ms. Dariye Getachew (Bsc, MPH)* E-mail: dariyeg21@gmail.com

   Tel: 251-910309530

3. *Mr. Temesgen Worku (Bsc, MSc)* E-mail: teme.worku@gmail.com

   Tel: 251-911755087

Annex -II: Part II: Consent Form (Certificate)

Greeting:

My name is _____. I am here to collect information from you on your episiotomy.

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. Whether you choose to participate or not, all the services you receive as any member of this community will continue and nothing will change. Information about your children that is collected during the research will be put away and no one but the researcher will be able to see it. Your participation in this research may not directly provide you a certain benefit as an individual. There are no side effects and known risks related with this kind of research so far and it takes only 10-20 minutes of participation.

Up to now you have been given all information that I feel you should know regarding the research project that you are being asked to participate in. I think you have understood the issues in detail. As I told you the survey has no risk, confidential and takes only 10-20 minutes of interview.

Thank you for your cooperation and listening!!!

Are you willing to participate?

Yes ☐ continue

No ☐ (stop the interview)

Name of Data collector_____ Signature _____

Name of Supervisor _____ Signature_____

Annex -III: Questionnaire

Date _____

Participant identification number ……...

Section- I- Socio-demographic variables

No.	Questions	Response	code
101	Age in complete year	----------	
102	Residence	1. Urban 2. Rural	
103	Gravida	1. Primi 2. Multi 3. Grand multi	
104	Parity	1. 0 2. I 3. II-IV 4. >V	

Section –II-pre-labor variables

No	Question	Response	code
105	Presence of medical disease	1. Hypertension 2. Gestational diabetes 3. Other (specify)	
106	Gestational age	1. Preterm 2. Term 3. Pot-term	
		4. Unknown	
107	Absence of previous vaginal delivery	1. Yes 2. No	

Section-III- labor characteristics variables

No	Questions	Response	code
108	Duration of labor complete in hour	----------	
109	Use of oxytocin	1. Yes 2. No	
110	Use of misoprostol	1. Yes 2. No	
111	Use of analgesia	1. Yes 2. No	
112	Is the health professional get permission to perform episiotomy	1. Yes 2. No	
113	Period of fetal expulsion complete in hour	----------	
114	Condition of fetal heart rate during 2nd stage	1. Normal (120-160) 2. Bradycardia(<100) 3. Tachycardia (>180)	
115	Fetal presentation	1. Vertex 2. Breech 3. Other(specify)	
115	Mode of delivery	1. NVD 2. Vaccum 3. Forceps	
116	Presence of me conium	1. Yes 2. No	
117	Time of delivery	1. Day 2. Night	
118	Indication for episiotomy	1. prolonged labor 2. NRFHR	

		3. APH 4. Breech 5. Fetal prematurity	
119	Attendant	1. Midwifery 2. Obstetrician 3. Nurse 4. Ho	

Section –IV perinatal and maternal outcome variables

No	Question	Response	Code
120	APGAR score (1^{st} &5^{th} minute)	1. Very low (0-3) 2. Low (4-6) 3. Normal (>7)	
121	Birth weight (kg)	1. Low birth weight (<2.5 kg) 2. Normal birth weight (2.5 - 3.9 kg) 3. Macrosomia (>4kg)	
122	Perinatal laceration	1. Yes 2. No	
123	Perineal tear	1. No 2. Grade –I 3. Grade-II 4. Grade-III 5. Grade-IV	
124	Type of episiotomy	1. Medial 2. Medio lateral	
		3. Other(specify)	
125	Counseled for perineal care	1. Yes 2. No	

Annex IV. Tigrigna version information sheet, consent and Questionnaire

ናይ ሓበሬታን ስምምዕነትን ወፅል ፎርሚ

መእተዊ:- እዙይ ናይ ሓበሬታን ስምምዕነትን ወፅል ፎርሚ ዝተዘጋጀወ ንተሳተፍቲ ናይ ምርምር ፕሮጀክት መበርሂ ንምሃብ እዩ:: ናይዚ ምርምር ቀንዲ ዕላማ ኣብ 2006 ዓም-2007ዓም ኣብ ሽረ ከተማ ኣብ ዘለዉ መንግስታዊን ዘይመንግስታዊን ጥዕና ትካላት ኣብ ዝወልዳ አዴታት ናይ ዝወሃብ ሓገዝ መጦባሕቲ አብ ከባቢ ብልዕቲ በዝሕን ስርዓትን ምስ ካልኦት መስተጋብራት ዘለዎም ርክብን ተመሳሰልቲ ምክንያታትን ንምፅናዕ እዩ::

ናይዚ ምርምር ፕሮጀት ጉጅለ ኣባላት :- ሓደ ዲግሪ ዋና ተመራመሪን ክልተ ኣማኸርትን (ክልተ ናይ ሚስተርስ) ካብ ጎንደር ዩኒቨርስቲ ዘካተተ እዩ::

ናይዚ ምርምር ፕሮጀክት ርእሲ:- ኣብ 2006 ዓም-2007ዓም ኣብ ሽረ ከተማ ኣብ ዘለዉ መንግስታዊ ጥዕና ትካላት ኣብ ብሞህፀነን ዝወልዳ አዴታት ምስ ካልኦት መስተጋብራት ዘለዎም ርክብን ተመሳሰልቲ ምክንያታትን ንምፅናዕ እዩ::

ናይ ዋና ተመራመሪ ሽም :- ኪዳነ ንጉሰ

ናይ ድርጅት ሽም :- ናይ ጎንደር ዩኒቨርስቲ ህክምናን ጥዕና ሳይንስ ኮሌጅን ናይ ሜዲዋይፈሪ ዲፓርትመንትን

ናይቲ መፅናጥቲ ወፃኢ ዝሽፍን ኣካል :- ጎንደር ዩኒቨርስቲ ህክምናን ጥዕና ሳይንስ ኮሌጅ

እዚ መፅናጥቲ ዝካየደሉ ምክንያት:- ናይዚ ምርምር ፕሮጀክት ቀንዲ ዕላማ ኣብ ሽረ ከተማ ኣብ ዘለዉ መንግስታዊ ጥዕና ትካላት ኣብ ዝወልዳ አዴታት በዝሒ አብ ከባቢ ብልዕቲ ዝወሃብ ሓገዝ መጦባሕትን ምስ ካልኦት መስተጋብራት ዘለዎም ርክብን ተመሳሰልቲ ምክንያታትን ንምፅናዕ እዩ:: ካብዚ ምርምር ዝርክብ ወፂኢት መስረት ገርካ ኣብ እዋን ወሊድ አብ ከባቢ ብልዕቲ ዝወሃብ ሓገዝ መጦባሕትን ምስ ካልኦት መስተጋብራት ዘለዎም ርክብን ተመሳሰልቲ ምክንያታትን ናይ ጥዕና ክነታተንን ንምፍላጥ ዝሕግዝ ሓበሬታ ንምርካብ እዩ::

ከይዲ ኣተገባብራ :- ኣብዚ ናይ ምርምር ፕሮጀክት ክትሳተፊ ፍቃደኛ እንተኾይንኪ ብሓበሬታ ሰብሰብቲ ምላሽኪ ክትህቢ ክትጥየቂ ኢኪ:: ምስ እዙይ ንኒንነኒ ናይ ኣብ ከባቢ ብልዕቲ ድሕሪ ወሊድ ዝወሃብ ምክሪ ክህልዎ እዮ:: ዝሀብክዮ ሓበሬታ ይኹን ናይዚ መፅናዕቲ ወፂኢት ዝኾነ ይኹን ሰብ ከም ዘይረክቦ ተገይሩ ሚሽጡ ዝተሓለወ ምካኑ እናሓበርና ቅኑዕ ምላሽኪ ክትህብና ብኣክብሮት ንሓትት::

ከጋጥም ዝክእል ሽግር ወይም ዘይምቻው:- እቲ መጠይቅ ንምምላእን ካልኦትን ናመፃ ንምመሳደን ካብ 15 - 20 ደቂቃ ክወድእ ይክእል እዩ:: ነገር ግን እዚ መፅናዕቲ ንመፃኣይ ንባዕልክን ነዚ ሕቡረተሰብን ክህልዎ ምስ ዝክእል ጥቅሚ ክረኣ ከሎ እዙይ ንእሽቶይ እዩ:: ስለዙይ ናትኪ ኣብዚ መፅናዕቲ ምስታፍ ናይቲ ሽግር ስፍሓት ንምፍላጥን እዞም ሽግራት ኣብ ምፍታሕ ዝህሉ ምምሕያሽ ጠቃሚ እታዎት ክኮን እዩ::

ጥቅምታት :- ኣብዚ ምርምር ስለዝተሳተፍኪ ኣብ ሜጨሻ እቲ መፅናዕቲ መሰረት ብምግባር ንባዕልክን ንካልኦት ወላዳትን ብቀጥታ ይኹን ብተዘዋዋሪ ኣብ ወሊድ ግዜ ኣብ ከባቢብልዕቲ ዝወሃብ ሓገዝ መጥባሕትን ናይ ጥዕና ክኣታትን ኣብ ምፍላጥ ጥቅሚ ክህልዎ እዩ::

ኣብዚ መፅናዕቲ ስለዝተሳተፍኪ ክህልዎ ዝክእል ጥቅማጥቅሚ ወይም ክፍያ :- ኣብዚ ምርምር ስለዝተሳተፍኪ ምንም ዓይነት ናይ ገንዘብ ክፍያ ኣይወሃብን::

ሚሽጠራዊነት :- ካብዚ መፅናዕቲ ዝተሰብሰበ ሓበሬታ ሚሽጥሩ ዝተሓለወ እዩ:: ስለ ናይ ባዕልኪ ዝተሰብሰቡ ሓበሬታ ሸዎኪ ኣይፀሓፍን ዝሃብክዮ ናመፃ እመን ብምሸጥር ክተሓዝ እዩ:: እዙይ እመን ካብ ዋና ተሚራሚሪን ተሓባበርቱን ወፃኢ ካለእ ሰብ ከምዝይፈልጦ ክግበር እዩ::

ኣብዚ መፅናዕቲ ናይ ዘይምሳታፍ ወይም ናይ ምቁራፅ መሰል :- ኣብዚ መፅናዕቲ ናይ ምሳታፍ ይኹን ዘይምሳታፍ መሉእ መሰል ኣለኪ:: ነቶም ጥያቄታት እመን ብመሉእ ይኹን ብከፊል መልሲ ናይ ዘይምሃብ መሰልኪ ዝተሓለወ እዩ::

ክረክብዎም ዝክእሉ ሰባት:- እዚ ምርምር ፕሮጀክት ብናይ ጎንደር ዩኒቨርስቲ ናይ ምርምን ስነምግባርን ኮሚቴ ተራእዩ ዝፀደቀ እዩ:: ተወሳኪ ሓበሬታ እንተደልዮ ናይዚ ምርምር ፕሮጀክት ኮሚቴ ኣባላት ካብዚ ንታሕቲ ብዘሎ ኣድራሻ ክትረክብዮም ትክእሊ ኢኪ:: ካብዞም ዝስዕቡ ግለሰባት ዝደለክዮ ኣብ ዝደለክዮ ግዜ ምጥያቅ ትክእሊ ኢኪ::

ዋና ተሚራሚሪ:- ; ስልኪ- 0934537937

ኣማኻርቲ:- ኣቶ ተሻገን ወርቁ (ኤም ኤስ ሲ); ስልክ-0911755087

ሲ/ር ዳርየ ጌታቸው (ኤም ፕኤች); ; ስልክ-0910309530

ንምሳታፍ ፍቃደኛ ድኪ?

ንምሳታፍ ፍቃደኛ እንተኮይና ናብ ዝቅፅል ገፅ ሕለፊ::

Annex IV: Tigrigna version questionnaire

ናይ ትግርኛ ቃለ መሕትት

ሕዝል -3: ክፍለ2: ፍቓድ ተሳተፍቲ መጠየቒ ቅጥዒ

ጥዕና ይሃበለይ

ሽመይ _____ እየ ዝበሃል.ናብዘይ ዝመፃእኹሉ ቀንዲ ዕላማ ብዛዕባ ኢፒዝዮቶሚ ሓበሬታ ምእካብ እዩ፡፡ ኣብዚ መፀናዕቲ እዙይ ንምስታፍ ምሉእ ንመሉእ ኣብ ናይ ባዕለን/ሉም ድሌት ዝተመርኮሰ እዩ፡፡

ከሉም ግልጋሎታት ጥዕና ኣብዚ ትካል እዙይ ዝረከበኦን ንድሕሪ ሐዚ ዝረኹቡኦን ዝኾነ ዓይነት ኣፈላላይ እንተይተገበረሉ ክቕፅለለን እዩ፡፡ ኣብዚ ግዜ መፀናዕቲ እዙይ ዝርከብ ክኒታት ሓበሬታ ደቕክን መስጠራጠሩ ዝተሓለወ ኮይኑ እቲ ተመራመራይ ናይዚ መፀናዕቲ ጥራይ ክሪኦ ክግበር እዩ፡፡

ኣብዚ መፀናዕቲ እዙይ ምስታፍክን ብቐጥታ ንወልቀኽን ዝወሃበክን ጥቕሚ ዘይክህሉ ይኽእል እየ፡፡.ኣብ ዚ መፀናዕቲ እዙይ ምስታፍክን ዝበፅሕ ዝኾነ ዓይነት ፀገም ወይ ድማ ዕንቅፋት ኣይህሉን ምኸንያቱ ማዘይቕና ኣብ ከባቢ 10-20ደቒቓ ኣብ ዘሎ ግዜ ምመዳእ ስለ ዝከኣል፡፡

ከሳብ ሐዚ ኣብ መፀናዕቲ ንምስታፍን ዘይምስታፍን ዘኽእለን እኹል ሓበሬታ ከምዘረኸባ ተስፋ ይገብር፡፡ብደንቢ ዝተረደአን ይማለኒ.ከምቲ ቅድም ኣለ ዝነገርክወን ኣብዚ ፅንዓት እዙይ ምስታፍክን ዝኾነ ዓይነት ጉድኣት ክበፅሐክን ከም ዘይኽእልን ዝሃብክንኦ ሓበሬታ ምስሐራመኒ ቱ ምሉእ ንምሉእ ዝተሓለወ ምኳኑን እናሓበረኩ እቲ ቃለ መሕትት ዝወስዶ ግዜ ድማ ካብ 10 ክሳብ 20 ደቓይቕ ጥራይ እዩ፡፡

ፅን ኣለን ንዘዳማኒ ካብ ልቢ የመስግን!!!

ኣብዚ ፅንዓት እዙይ ንምስታፍ ፍቓደኛ ደየን?

እወ ☐ ናብቲ መጠይቕ/ዝቕፅል ገፅ/ ይቕፅላ

ኣይኮንኩን ☐ (ናይቲ ቃለ መሕትት መወዳእታ ይኸውን)

ሽም ሓበሬታ ኣካቢ_____ ፈርማ_____

ሽም ተቕፃፃሪ _____ ፈርማ_____

ሕዘል ኣርባዕተ፡ ትግርኛ ማከይቕ

ዕለት፡ _____ ዓ/ም

ማለለዪ ቁፅሪ ተሳተፍቲ እቲ መፀናዕቲ .....

ክፍሊ1፡ ማሕበራዊን ከባቢያዊን ኩነታት ብዝምልከት

ተ.ቁ	ሕቶታት	ግብረ መልሲ	ኮድ
101	ዕድመ ወላድ ብዓመት	----------ዓመት	
102	ኣበይ ትነብር ነይራ	3. ከተማ 4. ገጠር	
103	ጠቕላላ ዝጠሰሰቶም በዝሒ ጥንሲ ክንደይ ነይሩ/ክንደይ ግዜ ጠኺሳ/	4. በኻር 5. ካብ ክልተ ክሳብ ሓሙሽተ ግዜ 6. ካብ ሓሙሽተ ግዜ ንላዕሊ	
104	ክንደይ ግዜ ወሊዳ /ሞይቱ ዝተወለደ እንተሃልዩ ሓዊስካ/	5. ኣይወለደትን 6. ሓደ ወሊዳ 7. ካብ2-4 ግዜ 8. ልዕሊ 4 ግዜ ወሊዳ	

ክፍሊ2፡ ኩነታት ቅድመ ወሊድ ብዝምልከት

ተ.ቁ	ሕቶታት	ግብረ መልሲ	ኮድ
105	ቅድመ ወሊድ ዝነበሩዋ ሕማሞት	4. ልዕልል ፀቕጢ ደም 5. ኣብ ግዘ ጥንሲ ዝተፈጠረ ሕማም ሽኮርያ 6. ካለእ እንተሃልዩ ይጠቕስ፡	
106	ዕድመ ናይዚ ጥንሲ እዙይ ክንደይ ነይሩ?	5. ጋና ዕድሜኡ ዘይኣኸለ 6. ኣብግዚኡ/ተርም/ 7. ግዚኡ ኣሕሊፉ/ዝደንጎየ/ 8. ኣይፍለጥን	
107	ቅድሚ ሐዚ ብስሩዕ ወሊዳ ነይራ ዶ?	3. እወ	

		4. ኣይፋሉን	

ክፍሊ3፡ ኩነታት ወሊድ ብዘምጽኽት

ተ.ቁ	ሕቶታት	ግብረ መልሲ	ኮድ
108	እቲ ሕርሲ ንቕንደይ ዝኣክል ሰዓታት ፀኒሑ	---------- ሰዓትን ደቒቓን	
109	ቅድሚ ምመላዳ ኣክሲቶሲን ዝበሃል መድሓኒት ተዋሂወዋ ዶ ነይሩ?	3. እወ 4. ኣይተወሃባን	
110	ቅድሚ ምመላዳ ሚፕፐርስቶል ዝበሃል መድሓኒት ተዋሂብዋ ዶ ነይሩ?	1.እወ 2.ኣይተወሃባን	
111	መጀንዘዚ መድሓኒት ቅድሚ ምመላዳ ተዋሂብዋ ዶ ነይሩ?	1.እወ 2.ኣይተወሃባን	
112	ቆልዓ ሕርሲካብ ዝጅምራ ድሕሪ ክንደይ ሰዓት ፀኒሑ ተወሊዱ?	---------- ብሰዓት ይፀሓፍ	
113	ኩነታት ትርግታ ልቡ ዕሸል ኣብ ግዘ ካልኣይ ደረጃ ሕርሲ ክንደይ ነይሩ?	4. ስሩዕ (120-160) 5. ትሑት(<100) 6. ኣዝዩ ቅልጡፍ (>180)	
114	ምርሓት ዕሸል ከሚ ነይሩ/ዕሸል ብምንታዩ ኣምሪሑ ተወሊዱ/?	4. ብንበር/ቩርቴክስ/ 5. ብመሳኮሩ 6. ካሊእ እንተሃልዩ ይፀሓፍ፡	
115	ኣደ ብኽመይ ወሊዳ?	4. ብሰሩዕ/ብበልዕታ/ 5. ብመምጠጢ መካርሒ/ቫክዩም/ 6. ብመስሓቢ መካርሒ/ፎርሴፍስ/	
116	ናፅላ ሓፊስቀልቀል/ሜኮንየም/ነይርዎ ዶ?	1.እወ 2.ኣይተወሃባን	
117	እንታይ ኣዋን ወሊዳ?	3. ቀትሪ 4. ለይቲ	
118	ኢፒዝዮቶሚ ንምንታይ ተሰሪሑላ?	6. ሕርሲ ስለዝደንጎየ 7. ኩነታት ትርግታ ዕሸል ፈሊኻ	

		ምፍላጥ ስለዘፀገመ 8. ቅድመ ወሊድ መድሚቲ ስለዝነበራ 9. ብመጓኮሩ ስለዝተቐልቀለ 10. ድመ መወለዲኡ እንተይ ኣኸለ ስለ ዝተወለደ	
119	መን ኣዋሊድዋ?	5. ሜድዋፍ በዓል ሞያ 6. ናይ ሚህፀንን ጥንስን ሓኪም 7. ነርስ 8. ጥዕና መኮነን	

ክፍሊ5፡ መፅኢት ክነታት ጥዕና ህፃንን ኣደን ድሕሪ ወሊድ ብዝምልከት

ተ.ቁ	ሕቶታት	ግብረ መልሲ	ኮድ
120	ኣብ መጀመርታን 5ይን ደቓይቕ ዝነበራ ዓቐን APGAR ክንደይ ነይሩ	4. ኣዝዩ ትሑት (0-3) 5. ትሑት (4-6) 6. ስሩዕ (>7)	
121	ክብደት ናይቲ ናፅላ ኣብ ወሊድ ክንደይ ነይሩ?	4. ትሑት (<2.5 ኪ.ግ) 5. ስሩዕ ክብደት (2.5 -3.9 ኪ.ግ) 6. ኣዝዩ ገዚፍ (>4ኪ.ግ)	
122	ቅድሚ ወሊድን ድሕሪ ወሊድን ናይ ቆርበት ብልዕቲ ምልሕላፅ ነይሩ ድዩ?	3. እወ 4. ኣይነበረን	
123	ኣየናይ ዓይነት ምቐዳድ ብልዕቲ ወይ በሪ ሚህፀን ኣጋጢሙ ነይሩ?	6. ኣይነበረን 7. ደረጃ –I 8. ደረጃ-II 9. ደረጃ-III 10. ደረጃ-IV	

124	እንታይ ዓይነት ምቹዳድ ብልዕቲ/ኢፕዝዮቶሚ/ ተሰሪሑል ነይሩ?	4. መድያን/ነናዊ/ 5. ሜዲላተራል/ሜኣኸላዊ ነናዊ/ 6. ካለእ እንተሃልዩ ይጠቕስ፤	
125	ከባቢ መሪቡሒ ኣካለታ ከሚይ ፅሬታ ክትሕሉ ከም ዘለዋ ናይ መኸሪ ኣገልግሎት ተዋሂብዋ ዶ ነይሩ?	3. እወ 4. ኣይተሞላባን	

1.1. Annex VII: Assurance of the Investigator

The undersigned agrees to accept responsibility for the scientific, ethical and technical conduct of the research project and for provision of required progress reports as per terms and conditions of the research and publications office of the University of Gondar.

Name of the student: Kidane Nguse G/mariam

Date: _____ Signature: _____

Approval of the Advisor(s)

Advisors:

Name:	**Signature**	**Date**
1. Mr. Temesgen Worku	_____	_____
2. Mrs. Dariye Getachew	_____	_____